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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF

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ICHIRO OKAJIMA, ET AL.

: EXAMINER: CHOUDHURY, A.Q.

SERIAL NO: 10/083,114

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FILED: FEBRUARY 27, 2002

: GROUP ART UNIT: 2145

FOR: LINK MANAGER AND LINK MANAGEMENT METHOD

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PRE-APPEAL BRIEF REQUEST FOR REVIEW

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicants request review of the final rejection in the above-identified application.

No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s). No more than five pages are provided.

I am the attorney or agent of record.

Respectfully submitted,

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FOR: LINK MANAGER AND LINK
MANAGEMENT METHOD :

REMARKS ACCOMPANYING PRE-APPEAL BRIEF REQUEST FOR REVIEW

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicants respectfully request that a Pre-Appeal Brief Conference be initiated in accordance with the pilot program outlined in the Official Gazette Notice of July 12, 2005.

Claims 1-3, 5-8, 10-13 and 15-29 are pending in the application.

In the Final Official Action of November 11, 2005, Claims 11, 12, 13, 25, 26 and 27 were rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter; Claims 15-27 and 29 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite; and Claims 1-3, 5-8, 10-13 and 15-29 were rejected under 35 U.S.C. § 102(b) as anticipated by Wang et al. (“Policy-Enabled Handoffs Across Heterogeneous Wireless Networks”, hereinafter “Wang”).

Claims 11-13 and 25-27 were rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter, this rejection is respectfully traversed. Independent Claims 11 and 25, each recite “a computer program product including a computer storage medium with a computer program code mechanism stored therein, which when executed by a computer causes the computer to perform a method of link management.”

MPEP § 2106 discusses statutory subject matter in relation to data structures of a computer readable medium. Particularly, MPEP § 2106 provides,

a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Thus, based on the clear language of this section, independent Claims 11 and 25, and the claims from which they respectively depend are statutory as they define a functionality of which is realized based on the interrelationship of the structure to the medium and recited hardware components.

The Advisory Action of March 28, 2006, further asserts that the “specification does not clearly define what a ‘computer storage medium’ is,” therefore the rejection under 35 U.S.C. § 101 is maintained. However, Fig. 2 and p. 8, lines 5-19 describes the link manager, and the various hardware components of the link manager that implement the computer program product. Thus, the specification clearly describes that the computer storage medium is part of the link manager, and one of ordinary skill in the art could easily identify that a “computer storage medium” is a memory device included in, and accessed by the link manager to execute the computer readable code stored in the computer storage medium.

Accordingly, Applicants respectfully submit that independent Claims 11 and 25 (and the claims that depend therefrom) recite statutory subject matter, and Applicants respectfully submit that the rejection of these claims under 35 U.S.C. § 101 be withdrawn.

Claims 15-27 and 29 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite because, as asserted in the Final Official Action, and the outstanding Advisory Action, “[t]he claims are claiming constant link metrics along with variable link metrics” and “the two types of metrics are considered contradictory as presently presented”. However, as clearly described in an exemplary, non-limiting embodiment at p. 11, lines 13-24 of the

specification, the “link metrics are classified under constant metrics and variable metrics” and “the metrics of technology standard, cost, link type, tolerable speed, QoS support, encryption support, power consumption, and sleep mode support are constant metrics, while the metrics of enables/disabled, connectivity, throughput, packet loss rate and latency are variable metrics.” Thus, the claimed terms of “constant” and “variable” link metrics are clearly defined in the specification, and are intended to reflect two different categories of link metrics, as claimed. Thus, while the two terms may be contradictory in the sense that they reflect two different types of metrics, the use of both terms do not render the claims indefinite. Instead the terms “constant” and “variable” link metrics are used to clearly define the metes and bounds of the claims.

Accordingly, Applicants respectfully request that the rejection of Claims 15-27 and 29 under 35 U.S.C. § 112, second paragraph, be withdrawn.

Independent Claim 1 was rejected under 35 U.S.C. § 102(b) as anticipated by Wang. Applicants respectfully submit that independent Claim 1 states novel features clearly not taught or rendered obvious by the applied reference.

Independent Claim 1 recites a link manager comprising:

detecting means for detecting a link installation;
managing means for defining a plurality of link metrics
indicating characteristics of each said link detected and managing
data corresponding to said respective link metrics on a table;
link metric rank assigning means for assigning ranks to said
respective link metrics, based on a predetermined preference;
data rank assigning means for assigning ranks to the data
corresponding to said respective link metrics; and
selecting means for selecting a link by *analyzing each link*
based on each individual stored metric in order of rank, and
selecting a link corresponding to a record having data with a
highest rank thus assigned, at a link metric with a highest rank.

In a non-limiting, exemplary embodiment, a link manager sorts records in a link management table (e.g., Fig. 6), using the link metric with the highest priority (e.g., Fig. 4) as a key. The link metric with the highest priority, is set as n=1 and each individual link is

examined with respect to this data assigned to the highest priority link metric. If one link is determined to have superior performance over the other links with respect to the link parameter having the highest priority, this link is selected as the active link. If two links are determined to have the same performance relative to the most important link, the next most important metric is analyzed to determine the superior link.¹

Turning to the applied reference, Wang describes that users may specify the importance or weights of each normalized parameter corresponding to characteristics of a specific link.² These weights are then used simultaneously to determine a “cost function” or similar cumulative parameter corresponding to a specified network in order to determine the best available link.³ Therefore, Wang describes that all of the parameters are normalized and weighted and then a calculation is performed in order to determine a network which is best suited for a specific mobile handoff based on the weighted preferences input by a user.⁴

However, Wang fails to teach or suggest selecting a link by *analyzing each link based on each individual stored metric in order of rank and selecting a link corresponding to a record having data with a highest rank thus assigned, at a link metric with a highest rank*, as recited in amended Claim 1.

In addressing the above-noted claimed feature, the outstanding Advisory Action states that “[i]n Wang, parameters are weighted and the link is selected based on which is ‘best’ based on the weighted parameters.”⁵ The Advisory Action then asserts that in Wang “[t]o form a ‘cumulative parameter,’ individual parameters (metrics) are first evaluated.”⁶ Applicants respectfully traverse this assertion.

¹ Specification at page 16, line 19 – page 18, line 10 and Fig. 7.

² Wang at page 55, col. 2, lines 29-35.

³ Id. at page 56, col. 1, lines 1-37.

⁴ Id.

⁵ Outstanding Advisory Action.

⁶ Id.

In Wang, users may specify the importance or weight of each parameter, which sum to 1, may be assigned to specific parameters, and, as described at p. 56, col. 1, lines 28-37 a “cost value”, is determined for each link, which is a cumulative parameter calculated based on taking into account all of the user’s assigned preferences. The cost value for each link, not each individual parameter, is then analyzed and the link with the lowest cost value is selected as the active link. Thus, Wang describes analyzing each link based on a cumulative parameter (cost value), not analyzing each link based on *each* parameter in order of rank.

Wang, therefore, fails to teach or suggest *analyzing each link based on each individual stored metric in order of rank and selecting a link corresponding to a record having data with a highest rank thus assigned, at a link metric with a highest rank.*

Accordingly, Applicants respectfully request the rejection of Claim 1 under 35 U.S.C. § 102(b) be withdrawn. For substantially the same reasons given with respect to amended Claim 1, Applicants respectfully submit that amended Claims 6, 11, 15, 20, 25 and 29 also patentably define over Wang.

In light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1-3, 6-8, 10-13, and 15-28 is definite and patentably distinguishing over Wang. Applicants therefore request that the rejections to the claims be withdrawn.

Respectfully submitted,

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